Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
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Northern Redbelly Dace

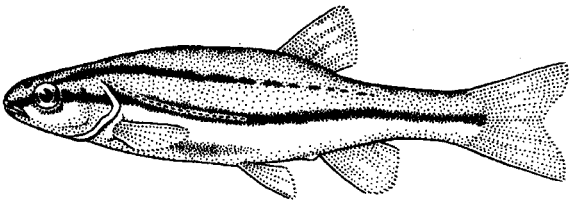
Phoxinus eos

State Status: **Endangered**
Federal Status: None

Description: The Northern Redbelly Dace can be distinguished from all other Massachusetts minnows by the presence of two longitudinal dark or dusky stripes along their sides and small scales that are almost invisible to the naked eye. The upper stripe is often broken into small dots or patches behind the dorsal fin, but the lower stripe is always complete. Other characteristics, such as the long, coiled intestine and the black peritoneum (lining of body cavity) are also helpful in identifying this fish. The lateral line is incomplete, and its mouth is small and oblique. They have 70 to 90 lateral line scales. This species averages 50 mm in total length. The lower sides and belly are white, silver, or yellow. During breeding season, these areas on the males become brilliant red.

Habitats: Northern Redbelly Dace are generally found in quiet, cool, boggy streams and lakes, however in Massachusetts they are found in clear streams and spring-fed seepage pools.

Food: Northern Redbelly Dace feed mainly on diatoms and filamentous algae, but also zooplankton and aquatic insect larvae. Their predators are thought to be other fishes, kingfishers, and mergansers.

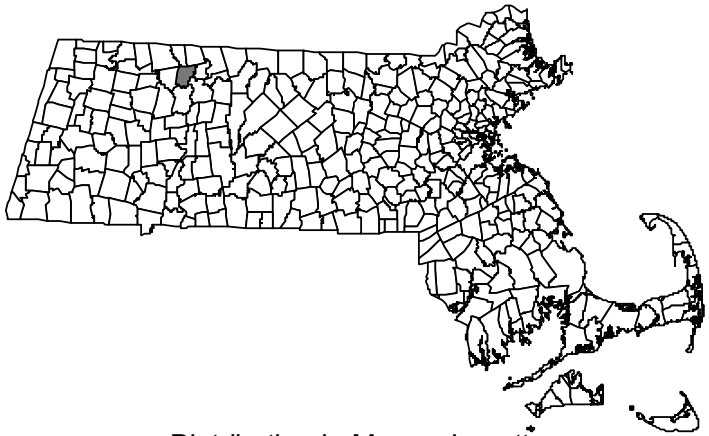


Drawing by Laszlo Meszoly, from Hartel et al. 2002. Inland Fishes of Massachusetts.

Life History: Northern Redbelly Dace begin spawning in spring and may continue as late as early August. They are fractional spawners, meaning that they can spawn multiple times during a season. They lay nonadhesive eggs in filamentous algae; eggs hatch in 8 to 10 days at water temperatures of 21-27°C. They may not reach maturity until their second or third summer and may live up to 8 years.

Threats: It is unknown why the Northern Redbelly Dace has declined in Massachusetts. Possible threats include erosion and sedimentation and flow alterations.

Gaps in knowledge: Unfortunately there are many gaps in knowledge of the life history and habitat requirements for this species, especially in Massachusetts. The one persisting population in Massachusetts is found in very different habitats than other more northern populations. Because of this discrepancy, it is difficult to use the published literature to determine the needs of this population. This population needs to be studied to learn more about what is threatening its existence.



Distribution in Massachusetts
1977 - 2002
Based on records in Natural Heritage Database

Breeding Season

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form as these donations comprise a significant portion of our operating budget.

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